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**In re Oelrich and Divigard**

**(CCPA)**

**212 USPQ 323**

**Decided Dec. 10, 1981**

**No. 81-564**

**U.S. Court of Customs and Patent Appeals**

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**Headnotes**

**PATENTS**

**1. Court of Customs and Patent Appeals -- Issues determined -- Ex parte patent cases (§ 28.203)**

**Prior adjudication -- Applications for patent (§ 56.05)**

Doctrine of res judicata argued in view of former case in which issue was obviousness is not applicable to instant anticipation rejection; furthermore, res judicata does not have its usual impact when considering ex parte patent appeals; public interest in

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granting valid patents outweighs public interest underlying collateral estoppel and res judicata, particularly where issue presented is not substantially identical to that previously decided.

**2. Patentability -- New use or function -- In general (§ 51.551)**

Mere recitation of newly discovered function or property, inherently possessed by things in prior art, does not distinguish claim drawn to those things from prior art.

**3. Construction of specification and claims -- "Means" claims (§ 22.60)**

**Pleading and practice in Patent Office -- Rejections (§ 54.7)**

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Rejection of claim whose distinguishing feature is words after means for function phrase is reversed where those words constitute limiting definition of means that is not expressly disclosed in reference nor inherent in it.

**Particular patents -- Control Mechanism**

Oelrich and Divigard, Sub-Critical Time Modulated Control Mechanism, rejection of claim 1 reversed.

**Case History and Disposition:**

**Appeal from Patent and Trademark Office Board of Appeals.**

**Application for patent of John A. Oelrich and Albert J. Divigard, Serial No. 452,050, filed Mar. 18, 1974. From decision rejecting claim 1, applicants appeal. Reversed.**

**See also 198 USPQ 210 .**

**Attorneys:**

**Roger A. Van Kirk, East Hartford, Conn., for appellants.**

**Joseph F. Nakamura and Thomas E. Lynch for Patent and Trademark Office.**

**Judge:**

**Before Markey, Chief Judge, and Rich, Baldwin, Miller, and Nies, Associate Judges.**

**Opinion Text**

**Opinion By:**

**Rich, Judge.**

This appeal is from the decision of the United States Patent and Trademark Office (PTO) Board of Appeals (board) sustaining the examiner's rejection of claim 1 in application serial No. 452,050, filed March 18, 1974, entitled "Sub-Critical Time Modulated Control Mechanism," under 35 USC 102 as anticipated by appellant Oelrich's U.S. patent No. 3,430,536 for "Time Modulated Pneumatically Actuated Control Mechanism," issued March 4, 1969. We reverse.

**Background**

This application was the subject of *In re Oelrich*, 579 F.2d 86, 198 USPQ 210 (CCPA 1978), in which a rejection of claims 1-5 under 35 USC 103 was reversed.

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Appellant's method claims 2-5 now stand allowed.

The invention of claim 1 is directed to an apparatus specially adapted for moving low inertia steering fins on guided missiles. The prior art apparatus and the theory upon which it operates are fully discussed in our above prior opinion and will, therefore, not be repeated here. Generally, the claimed device responds to an electric signal from a missile guidance system, the magnitude of which is proportional to the desired amount of course-correcting fin movement, and converts the signal into a pneumatic pressure of appropriate magnitude which acts on a piston to move the missile guiding fin. The device which is the subject of the Oelrich patent "was employed only with the then available steering fins which they characterize as 'high inertia' loads." <sup>1</sup> The frequency at which this "high inertia" load system is operated is stated to be *above* the critical (resonant) frequency of the system. 579 F.2d at 87-89, 198 USPQ at 212-13. The allowed method claims and apparatus claim 1 direct use of a carrier frequency *below* the critical frequency of the system.

Claim 1 reads (emphasis ours):

1. A time modulated fluid actuated control apparatus comprising:  
housing means, said housing means defining a cylinder;  
actuator piston means disposed in said housing means cylinder, said piston means including an output member adapted to be connected to a movable load, said load and control apparatus

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defining a *system having a range of resonant frequencies*;

solenoid operated valve means mounted on said housing means, said valve means being selectively operable to deliver pressurized fluid to and to vent fluid from said housing means cylinder at one side of said piston means;

means for generating variable input command signals commensurate with the desired position of the load, said command signals being characterized by a dynamic frequency range *below said range of said resonant frequencies*;

means for generating a signal at a *carrier frequency*, said carrier frequency being *greater than the maximum dynamic command signal frequency and less than the minimum system resonant frequency*;

means for modulating said carrier frequency signal by said command signals; and

means responsive to said modulated carrier frequency signal for controlling energization of said solenoid operated valve means.

In sustaining the examiner's rejection under §102, the board expressed agreement with his reasoning, which is here summarized. Stating that "the issue is identical to that decided in *In re Ludtke*, 58 CCPA 1159, 441 F.2d 660, 169 USPQ 563 (1971)," the examiner noted that, for purposes of determining inherency, "the question is, does Oelrich [the reference patent] disclose a signal generator that necessarily must supply the carrier frequencies that appellants use?" The examiner turned to Exhibit A of coapplicant Divigard's affidavit, which states as an assumption in a "Linearized Simulation" of a "high inertia" load system that the critical resonance frequency must be kept below 80 Hz

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to avoid interaction with the carrier frequency which is between 100 and 150 Hz. Thus, the examiner concluded, "Exhibit A establishes Oelrich's carrier frequency range, which may now be compared with the carrier frequency range of applicants' low-inertia system." It was then asserted that the Oelrich and Kolk affidavits establish that good low inertia system design practice dictates a carrier frequency range of 95-190 Hz. Since the carrier frequency range for the high inertia system lies within the range for the low inertia system, and since the critical frequency of the low inertia system is near the solenoid limit of 175 Hz, the examiner posited that the Oelrich carrier frequencies would be sub-critical in the low inertia system, saying, "Thus Oelrich's signal generator does in fact inherently produce frequencies which would be sub-critical when used with a low-inertia system, and therefore, inherently supplies a carrier frequency range which is usable in applicants' system since this conclusion was deduced from specific data presented in the patent and in the affidavits supplied by appellants." The appellants also asserted our prior decision was *res judicata*.

### Opinion

[1] Although appellants' arguments on appeal are directed primarily to a discussion of *res judicata*<sup>2</sup> and whether a "product which is unwittingly produced is anticipation," resolution of this case is properly had by comparison of the reference patent to the limitations of claim 1. As will appear, the determinative issue is a question of inherency.

The distinguishing feature of claim 1 is defined in the paragraph which states that the apparatus contains a

means for generating a \* \* \* carrier frequency \* \* \* greater than the maximum dynamic command signal frequency and *less than* the minimum system resonant frequency.<sup>3</sup>

Given that the carrier frequency which can be used in a low inertia system *may* fall within the range of carrier frequencies usable in a high inertia system (appellants admit as much), the PTO urges that the apparatus of the Oelrich patent inherently performs the function of the apparatus of claim 1, and that finding a new use for an old device does not entitle one to an apparatus claim for that device, citing *In re Wiseman*, 596 F.2d 1019, 201 USPQ 658 (CCPA 1979). Appellants in that case argued, however, that a structure suggested by the

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prior art was patentable to them because it also possessed an *inherent but unknown* function which they claimed to have discovered. This court stated that a "patent on such a structure would remove from the public that which is in the public domain by virtue of its inclusion in, or obviousness from, the prior art." *Id.* at 1023, 201 USPQ at 661.

Appellants here countered the PTO inherency contention at oral argument (no reply brief was filed) by urging that there is no "inherency" because there is no "inevitability," that is, the previously quoted "means plus function" limitation of claim 1 is not inherently (always) present in the device of the Oelrich patent.

[2] It is true that mere recitation of a newly discovered function or property, inherently possessed by things in the prior art, does not distinguish a claim drawn to those things from the prior art. *In re Swinehart*, 58 CCPA 1027, 1031, 439 F.2d 210, 212-13,

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169 USPQ 226, 229 (1971). In this case, however, claim 1 does not merely recite a newly discovered function of an old device. In *re Chandler*, 45 CCPA 911, 254 F.2d 396, 117 USPQ 361 (1958), a case not cited by either party to this appeal, is most pertinent to the instant controversy.

The claim in *Chandler*, *id.* at 912-13, 254 F.2d at 397, 117 USPQ at 361-62, drawn to an automatic control for a jet engine, included a "means responsive to said movement for regulating the propulsive power of said engine, in accordance with said movement, *so that* said aircraft is propelled at a definite, selected speed, corresponding to the position of said engine relative to said aircraft, throughout the speed range of said aircraft." (Emphasis added.) In refuting the examiner's argument that the words beginning with "so that" were merely functional, and thus did not distinguish the device from that claimed in a patent to Goddard, this court stated:

\* \* \* the expression beginning with "so that" is not merely functional, but constitutes a part of the definition of the "means responsive to said movement." Thus that means is defined as being responsive to the movement of the engine in such a way that the aircraft will be propelled at a definite speed in the manner specified. Such a definition conforms to the provision of 35 U.S.C. 112 that an element in a claim for a combination "may be expressed as a means or step for performing a specified function without the recital of structure, material or acts in support thereof. <sup>4</sup>

[3] Likewise, the words after "means for generating a \* \* \* carrier frequency" in the claim on appeal constitute a limiting definition of the means. The PTO does not contend that this limitation, a carrier frequency which is "less than the minimum system resonant frequency," is expressly disclosed in the Oelrich patent. Neither, however, is this limitation inherent therein. In *Hansgirk v. Kemmer*, 26 CCPA 937, 940, 102 F.2d 212, 214, 40 USPQ 665, 667 (1939), the court said:

Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing *may* result from a given set of circumstances is not sufficient. [Citations omitted.] If, however, the disclosure is sufficient to show that the natural result flowing from the operation as taught would result in the performance of the questioned function, it seems to be well settled that the disclosure should be regarded as sufficient.

The relationship between the carrier frequency and the system critical frequency -- the former below the latter (and expressly made a claim limitation by use of "means plus function" language) -- cannot be said to be "the natural result flowing from the operation as taught." The Oelrich patent instructs that the device is "adapted to receive a carrier frequency substantially in excess of the particular system critical or resonant frequency\* \* \*." Given this express teaching, a "means for generating a\* \* \* carrier frequency\* \* \* less than the minimum system resonant frequency" is not inevitably present.

The decision of the board is *reversed*.  
*Reversed.*

### Footnotes

Footnote 1. While the solicitor equates "low-inertia" with a "relatively light load" and  
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"high-inertia" with a "relatively heavy load," appellants are not as unequivocal. They refer to "small inertia" and "low inertia" loads, but, for example, the Divigard affidavit refers to "Fin Inertia" in terms of "in-lb sec 2/rad," a unit of measure applicable only in referencing *moment of inertia*, not *inertia*. The difference is significant because inertia, measured in terms of *mass*, is closely related to *weight*, while moment of inertia is affected by the *distribution* of the mass. Because of this ambiguity, we cannot and do not use the terms "weight" and "inertia" interchangeably.

Footnote 2. The doctrine of res judicata, argued in view of our decision in *In re Oelrich*, 579 F.2d 86, 198 USPQ 210 (CCPA 1978), is not applicable to the instant rejection. The issue in the former case was obviousness; here it is anticipation. A new rejection is before us. Furthermore, res judicata does not have its usual impact when considering ex parte patent appeals; the public interest in granting valid patents outweighs the public interest underlying collateral estoppel and res judicata, particularly where the issue presented is not substantially identical to that previously decided. *In re Russell*, 58 CCPA 1081, 1083, 439 F.2d 1228, 1230, 169 USPQ 426, 428 (1971); *In re Craig*, 56 CCPA 1438, 1441-42, 411 F.2d 1333, 1335-36, 162 USPQ 157, 159 (1969).

Footnote 3. Emphasis is ours. Portions of the claim unnecessary to this discussion have been omitted for clarity.

Footnote 4. For a similar case, see *In re Wilson*, 53 CCPA 1141, 1148-49, 359 F.2d 456, 461, 149 USPQ 523, 527 (1966). The provision of §112 referred to is, of course, the sixth paragraph, formerly, at the times of Chandler and Wilson, the third paragraph. The change occurred January 24, 1978.

- End of Case -

